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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/779,030	02/08/2001	Barry Billig	SD-204A	4437

7590 07/20/2004  
WILLIAM C. LONG  
118 WASHINGTON STREET  
MORRISTOWN, NJ 07960

EXAMINER

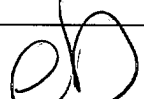
RIDLEY, BASIA ANNA

ART UNIT	PAPER NUMBER
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1764

DATE MAILED: 07/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/779,030	<b>Applicant(s)</b> BILLIG ET AL.	
	<b>Examiner</b> <i>BR</i> Basia Ridley	<b>Art Unit</b> 1764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 February 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>032901</u> . | 6) <input type="checkbox"/> Other: ____  |

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The information disclosure statement (IDS) submitted on 29 March 2001 is being considered by the examiner.

### ***Specification***

2. The disclosure is objected to because of the following informalities:
  - "reaction gases" on P3/L17 should be replaced with --product gases--;
  - "exit 6" on P5/L13 should be replaced with --exit head 6--;
  - "exit head 11" on P7/L3 should be replaced with --heat exchanger exit head 11--.

Appropriate correction is required. Applicant is reminded that no new matter shall be added.

### ***Drawings***

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "tubular heat exchanger integrally affixed to said outlet head sheet, said outlet head sheet having an opening for the passage of the reaction gas mixture from the reactor to said exchanger", as recited in lines 4-7 of claim 1, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference character(s) mentioned in the description: "heat exchanger exit head 11" as recited on P3/L6 and P7/L3.

Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures

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appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

#### ***Claim Objections***

4. Claims 1-3 are objected to because of the following informalities:
- said "outlet head sheet" recited in line 5 needs to be corrected for claim language consistency.

Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Ozero et al. (USP 4,921,681).

Regarding claims 1-3 Ozero et al. discloses a reactor and heat exchanger cooler assembly comprising:

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- a tubular reactor (10) having an inlet head and an outlet head (Fig. 1);
- reaction tubes (12b) packed with catalyst within said reactor supported by an inlet end tube sheet (14a) and an outlet end tube sheet (18);
- a tubular heat exchanger (Cooling Zone) integrally affixed to said outlet head sheet (18);
- said outlet head sheet (18) having at least one opening for the passage of the reaction gas mixture from the reactor to said exchanger and through tubes (12c) in said heat exchanger (Fig. 1);
- wherein said reaction gases are cooled by indirect heat exchange with a heat exchange fluid introduced into said heat exchanger (Fig. 1 and C3/L6-15);
- wherein means are provided for cooling the tubes in both the reactor and the heat exchanger with water (Fig. 1 and C3/L6-15);
- wherein the reactor is packed with a supported silver catalyst (C4/L20-23).

7. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Sawada et al. (USP 5,292,904).

Regarding claims 1-3 Sawada et al. discloses a reactor and heat exchanger cooler assembly comprising:

- a tubular reactor (1) having an inlet head and an outlet head (Fig. 1);
- reaction tubes (5) packed with catalyst within said reactor supported by an inlet end tube sheet (2) and an outlet end tube sheet (4);
- a tubular heat exchanger (8) integrally affixed to said outlet head sheet (4);
- said outlet head sheet (4) having at least one opening for the passage of the reaction gas mixture from the reactor to said exchanger and through tubes in said heat exchanger (Fig. 1); wherein
- said reaction gases are cooled by indirect heat exchange with a heat exchange fluid introduced into said heat exchanger (Fig. 1 and C4/L14-56);

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- means are provided for cooling the tubes in both the reactor and the heat exchanger with water (Fig. 1 and C4/L14-56);
- the reactor is packed with a supported silver catalyst (C4/L14-56).

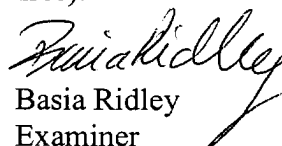
***Conclusion***

8. In view of the foregoing, none of the claims are allowed.
9. The Group and/or Art Unit location of your application in the PTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Group Art Unit 1764.
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Basia Ridley, whose telephone number is (571) 272-1453.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola, can be reached on (571) 272-1444.

The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Technical Center 1700 General Information Telephone No. is (571) 272-1700. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Questions on access to the Private PAIR system should be directed to the Electronic Business Center (EBC) at (866) 217-9197 (toll-free).

  
Basia Ridley  
Examiner  
Art Unit 1764

BR  
July 16, 2004